

in the range of 0.5 to 20  $\mu\text{m}$ , said components comprising active compounds and auxiliaries, said auxiliaries being selected from the group comprising antifreeze agents, stabilizers, antifoams, wetting agents, dispersants and carriers.

32. A process according to claim 31 wherein said components are finely ground and adjusted to a degree of fineness < 10  $\mu\text{m}$ .

### REMARKS

Favorable consideration of the subject application is respectfully requested. This Amendment and Reply is in response to the Office action mailed November 21, 2000. The three-month shortened statutory period set for response expired February 21, 2001. A Petition for an Extension of Time of three months and the required fee accompany this submittal, extending the period for response to **May 21, 2001**.

Applicants elected to prosecute claims directed to biscarbamates (active compound), silicic acids (inorganic absorbent) and tridecanols having from 5 to 13 ethoxy units (surfactants), with Claims 1-13 being drawn to the elected invention. Claims 1-13 were considered in this application.

Claims 1-13 have been cancelled and replaced with newly added Claims 14-32. Claim 14 includes many of the features of cancelled Claim 1, but also recites plant protection compositions in the form of suspension concentrates. This feature of the claimed invention is described in the specification, as filed, at page 6, fourth paragraph, and in the Examples at pages 7-15. Claim 15 recites crop protection compositions formulated as a water-based suspension concentrate. This feature of the claimed invention is described, for example, in the description of suspension concentrates at pages 8 and 9 and in the Examples. Claim 16 recites subject matter presented in cancelled claim 2; claim 17 recites subject matter presented in cancelled claim 3; claims 18 and 19 recite subject matter presented in cancelled claim 11; claims 20-22 recite subject matter presented in cancelled claims 1, 4 and 10; claim 23 recites subject matter presented in cancelled claim 6; claims 24-26 recite subject matter presented in cancelled claims 7 and 8; claims 27 and 28 recite subject matter presented in cancelled claim 10; and claims 29-32 recite subject matter presented in cancelled claims 7, 12 and 13, as well as subject matter described in the specification at page 6, second and third paragraphs.

The specification has been amended at pages 7, 10, 11 and 14 to correct minor typographical errors. Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version with markings to show changes made."

It is urged that there is a clear basis, in the application as it was originally filed, for the amendments to the specification and for the newly added claims.

Claims 1, 5, 7-10, 12 and 13 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the applicants' invention. The Examiner made several specific objections to the claims, as filed. The claims have been rewritten with these objections in mind. It is urged that newly added claims 14-32 do particularly point out and distinctly claim the subject matter of the applicants' invention in a manner that satisfies the requirements of 35 U.S.C. 112, second paragraph.

Claims 1-3, 6-8, 10, 12 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wieschollek et al. (GB 2 245 494). This rejection is respectfully traversed, particularly in view of the following remarks.

✓ The Examiner takes the position that the addition of inorganic adsorbents as carriers, surfactants and other ingredients to an herbicide composition was basically described by Wieschollek et al. Applicants disagree with this characterization of the prior art and submit that one of ordinary skill in the art could not have made the claimed invention by relying on routine experimentation.

✓ *Dkt* Wieschollek et al. disclose herbicidal compositions in the form of wettable powders or granules, but not suspension concentrates. Applicants note that, according to Wieschollek et al., silicates/silicic acids are always used in connection with ground materials such as clays (See page 6, lines 10-18 and examples on pages 7-11). Thus, this reference teaches that a combination of clays and silica is suitable for formulating certain herbicides as granules or powders. There is no indication or suggestion that the addition of silica would be of any benefit when formulating suspension concentrates, as in the present invention. Therefore, it is urged that one of ordinary skill in the art would have been motivated by the teachings of Wieschollek et al. to add inorganic adsorbents such as silica to a suspension concentrate. Aside from teaching the use of silicates as carriers or formulation auxiliaries for manufacturing granules or powders, Wieschollek et al. do not provide any motivation to add adsorbents such as silicates to herbicidal

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24 compositions. Wieschollek et al. do not disclose that by adding an inorganic adsorbent, the efficacy of an herbicide composition may be improved and the species selectivity may be broadened. (See specification, as filed, at page 2, first paragraph.)

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Wieschollek et al. as applied to claims 1-3, 6-8, 11, 12 and 13, above, and further in view of CIBA-GEIGY PCT Publication WO 95/18531. This rejection is respectfully traversed, particularly in view of the following remarks.

Q2e The teachings of, and deficiencies of the Wieschollek et al. reference are described above. Like Wieschollek et al., the CIBA-GEIGY PCT International Publication refers to wettable powder formulations of herbicides (see, for example, page 1, paragraph 1), rather than suspension concentrates. CIBA-GEIGY disclose that storage-stable wettable powders can be obtained by applying the active compound on a solid porous carrier material (e.g. silicic acid), together with an alkylene-oxylated alcohol. This is done to improve the suspensibility of the powder after storage (See Examples at pages 10-13). CIBA-GEIGY improves the suspensibility of herbicide powders by adding, for example, isotridecanol ethoxylates, which produces increased biological activity of the herbicidal powder. It is urged that one of ordinary skill in the art would not have been motivated to consider the teachings of CIBA-GEIGY, relating to wettable powder formulations of herbicides, in formulating the suspension concentrates of applicants' invention. CIBA-GEIGY does not overcome the deficiency of the Wieschollek et al. reference. Furthermore, applicants' do not perceive any motivation to combine the teachings of Wieschollek et al. and CIBA-GEIGY in the manner suggested by the Examiner.

Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Wieschollek et al. as applied to claims 1-3, 6-8, 10, 12 and 13 above, and further in view of JP 63023804. This rejection is respectfully traversed, particularly in view of the following remarks.

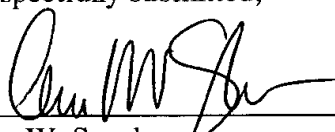
9 The teachings of, and the deficiencies of, the Wieschollek et al. reference are described above. The JP 63023804 reference discloses herbicide mixtures in the form of a wettable powder or emulsion comprising three different active components. Among other substances, silica gel is proposed for use as a solid carrier. The Examiner concluded that one would have been motivated to add silica gel to broaden the herbicidal spectrum for the composition. It is urged that this conclusion is not reasonable, given the teachings of the reference. JP 63023804 states that the herbicide has a broad herbicidal spectrum... synergistic effect is obtained. The

teaching of this reference is that the specified combination of three herbicides has a broad effect or synergistic effect on weeds. There is no suggestion that the "broad herbicidal spectrum" is linked to the presence of a carrier, e.g. silica. Even if one of ordinary skill in the art were aware of the JP 63023804 reference, there would be no motivation to add silica gel to any given herbicide composition, e.g. a suspension concentrate, to broaden the activity spectrum of the active substances contained there.

It is urged that pending claims 14-32 are patentable in the manner required by 35 U.S.C. Early consideration and allowance of the pending claims is respectfully solicited.

Respectfully submitted,

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Date: May 21, 2001

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PATENT TRADEMARK OFFICE

**Version with markings to show changes made**

**In the Specification:**

Paragraph beginning toward the middle of page 4, line 11, has been amended as follows:

The surfactants to be employed according to the invention are selected from the group of ethoxylated C<sub>6</sub> to C<sub>20</sub> alcohols, preferably C<sub>6</sub> – C<sub>16</sub>, of the ethylene/propylene oxide block copolymers, if appropriate comprising ethylene diamine as starter unit, and of the alkyl ether sulphates and their combinations. It is also possible to employ ethoxylated castor oil. Preference is given to using ethoxylated tridecanols having from 5 to 13 ethylene oxide units, sodium, potassium or ammonium alkyl ether sulphates, in particular sodium, potassium or ammonium fatty alcohol diglycol ether sulphates or mixtures of these surfactants. Particular preference is given to using the surfactants Volpo T/785, Volpo T/10, Genapol LRO, Emulsogen, Pluronic types or mixtures of these surfactants, which are known per se. The proportion of surfactant in the crop protection compositions according to the invention is from 5.0 to 40.0% by weight, preferably between 10.0 and 25% by weight.

The paragraph beginning at page 7, line 13, has been amended as follows:

The table shows the scores obtained in a herbicide trial in sugar beet. A conventional metamitron SC was compared, at an equivalent application rate in 1/ha, but with reduced amounts of active compound per ha, with a metamitron SC according to the invention.

(6.5 l/ha X 700 g/l = 4550 g/ha compared with 6.5 l/ha X [500] 550 g/l = 3575 g/ha corresponding to -21.4%)

The composition of Suspension concentrate B, at the upper right-hand column of page 8, has been amended as follows:

Suspension concentrate B:

	g/l
desmedipham	35
phenmedipham	100
ethofumesate	200
Pluronic	<u>55</u>
Genapol LRO	150
silica gel SM 614	35
antifreeze agent	60
stabilizer	0.5
antifoam	5
water	ad 1 l

The paragraph beginning at page 10, under the heading "Example 2: Comparison of the activity of two crop protection compositions has been amended as follows:

A crop protection composition according to the invention (suspension concentrate [B] C; SC [B] C) which comprised 320 g/l of desmedipham was compared with a crop protection composition known from the prior art (Betanal® AM from Hoechst Schering AgrEvo GmbH; Betanal AM comprises only desmediphan; EC), which comprised 160 g of desmediphan/l. 0.75 ml of the suspension concentrate according to the invention (SC [B] C)/ha and 1.5 l of Betanal AM (EC)/ha were applied (this corresponds to equivalent amounts/ha). The results are shown in Tab. 3 and Fig. 2.

The table at the top of page 11 has been amended as follows:

Comparison of the activity of a suspension according to the invention with *Betanal AM							
Type	Activity [%] /species						
	GALAP	MATCH	MATIN	STEME	CHEAL	POLPE	Mean
SC [B] C	30	60	35	55	95	20	49.2
EC	40	30	20	0	100	20	35

The table at the top of page 14 has been amended as follows:

Variant	Active Compounds (g/l)	Appli- cation rate (l/ha)	Activity %		
			ø*		
			6 species	Matin**	Match***
Standard EC Betanal ® AM	160 DMP	1	20	0	30
		1.5	35	20	30
		2	46.7	20	40
Suspension according to the invention SC [B] C (Code No. 8101- 006197 comprising 20 g of silica gel/l)	320 DMP	0.5	35.8	20	60
		0.75	49	35	60
		1	62	75	70